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(54) **Solid cosmetic product in water-in-oil non-ionic emulsion**

(57) Solid cosmetic product in water-in-oil non-ionic emulsion, comprising:

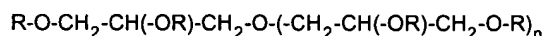
e) from 0.5 to 20% of a non-ionic emulsifier or of a mixture of non-ionic emulsifiers of the carboxyl-alkyl-polyglycerols family :

where n= 1 to 50, R= H and/or C₁₈ to C₃₃;

f) from 5 to 90% of a lipid phase with dropping point higher than 60°C;

g) from 1 to 80% of a water phase;

from 1 to 80% of a powder phase.



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Description

[0001] The present invention concerns a solid cosmetic product in water-in-oil (W/O) non-ionic emulsion.

[0002] In the field of cosmetics emulsions represent a typology of presentation of the cosmetic product that allows to carry out both a protective as well as functional action in the topic treatment of the epidermis.

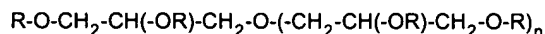
[0003] The realisation of an emulsion is fundamentally determined by the emulsifying system being used, that can avail of non-ionic, cationic, anionic and amphoteric type molecules.

[0004] Each emulsifier determines the optimal affinity between phases, delicacy and compatibility with the epidermis.

[0005] Specific object of the present invention is to obtain a solid cosmetic product in water-in-oil (W/O) emulsion with a high cosmetic delicacy, utilisable both for makeup as well as for the treatment of the skin.

[0006] According with the invention such object has been attained with a cosmetic product comprising:

a) from 0.5 to 20% of an non-ionic emulsifier or of a mixture of non-ionic emulsifiers of the carboxyl-alkyl-polyglycerols family:



where n= 1 to 50, R= H and/or C₁₈ to C₃₃;

b) from 5 to 90% of a lipid phase with dropping point higher than 60°C;

c) from 1 to 80% of a water phase;

d) from 1 to 80% of a powder phase.

[0007] Qualifying is the use of the polyglycerols for their high efficiency in the maintenance of the micellar structure through time and during the manufacture process and for their high dermal compatibility.

[0008] The lipid phase can be made of natural and/ or synthetic liquid and waxy esters, liquid and waxy alcohols, silicone oils and waxes, polyalphaolefines with variable molecular weight, polyethylene waxes, microcrystalline waxes, and more.

[0009] The water phase can in turn consist of different wetting agents, as glycerine, butylenic glycol, hexylene glycol, from PEG 4 to PEG 100, sorbitol, manitol, saccharose, fructose, different electrolytes as NaCl, MgSO₄, Na-lactate, KCl, and other more.

[0010] The powder phase can be semi-transparent or coloured with different covering power, made of different excipients powders, as talc, kaolin, mica, rice starch, modified starches, reticulated polymethyl-metacrylate, polyamides, tricalcic phosphate, silica, lauroyl lysine, barium sulphate, boron nitride, and of colour pigment of different nature as titanium dioxide, iron oxides, ultramarine blue, zinc oxide, D&C red 30, D&C red 7 Al Lake, D&C yellow 5 Al Lake.

[0011] Only as an example and without any limiting intention some formulations considered to be as suitable for specific cosmetic products are hereafter reported.

Example n. 1: Compact foundation cream	
Ingredients	%
Trioctanoate trimethylpropane	5.00
Iso hexadecane	6.50
Squalene	2.00
Hydrogenated vegetable oil	3.50
Distearate polyglyceryl	6.00
Vergin wax	2.00
Candle wax	3.30
Hydrogenated castor oil	2.00
Pentacyclomethycon	4.60
Caprylic/capric-glycerids	6.10
Micro-crystalline wax	2.00

(continued)

Example n. 1: Compact foundation cream	
Ingredients	%
Soy sterol	0.50
Water	15.20
Glycerine	5.00
Butylen glycol	4.80
MgSO ₄	0.30
Na-lactate	0.80
Hydroxyl-ethyl-cellulose	0.20
Potassium sorbate	0.20
Xantam rubber	0.20
Titanium dioxide	8.50
Iron oxides	4.20
Ultramarine Blue	0.30
Zinc Oxide	2.00
Nylon-12	4.00
Polymethylmetacrylate	3.00
Rice starch	3.80
Silica	2.00
Mica	2.00
Total	100.00

Example n. 2: Compact protective cream	
Ingredients	%
Cetyl Octanoate	15.60
Hydrogenated vegetable oil	10.10
Rice wax	2.00
Cholesteryl-hydroxyl-stearate	0.50
Hydrogenated castor oil	3.20
Soy sterol	0.30
Pentacyclomethycon	16.59
Distearate polyglyceryl	8.00
Caprylic/capric glycerids	6.20
Micro-crystalline wax	2.50
Water	21.00
Glycerine	6.00
Sorbitol	3.50
Mannitol	2.00

(continued)

Example n. 2: Compact protective cream	
Ingredients	%
Xantam rubber	0.20
Potassium sorbate	0.30
MgSO ₄	0.40
Na-lactate	0.60
Na jaluronate	0.01
Alfa-Bisabol	0.20
Matricaria extract	0.80
Total	100.00

Example n. 3: Stick foundation cream	
Ingredients	%
Cetyl iso nonanoate	4.85
Cetyl octanoate	10.50
Squalene	3.70
Pentacyclomethycon	4.10
Iso hexadodecanoate	3.90
Hydrogenated vegetable oil	2.05
Rice wax	3.00
Candle wax	2.80
Distearate polyglyceryl	6.00
Soy sterol	0.30
Caprylic/capric glycerids	4.00
Ceresine	2.10
Hydrogenated castor oil	2.00
Micro-crystalline wax	3.60
Water	14.10
Glycerine	6.00
Butylen glycol	2.00
MgSO ₄	0.40
Sorbitol	1.00
Potassium sorbate	0.20
Hydroxyl-ethyl-cellulosa	0.20
Xantam rubber	0.20
Titanium dioxide	8.50
Iron oxides	3.00
Ultramarine blue	0.50

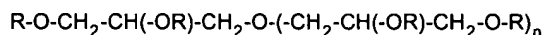
(continued)

Example n. 3: Stick foundation cream	
Ingredients	%
Zinc oxide	1.00
Borom nitride	1.00
Lauroyl lysine	1.50
Rice starch	3.00
Silica	2.50
Talc	2.00
Total	100.00

Claims

1. Solid cosmetic product in water-in-oil non-ionic emulsion, comprising:

a) from 0.5 to 20% of a non-ionic emulsifier or of a mixture of non-ionic emulsifiers of the carboxyl-alkyl-polyglycerols family:



where n= 1 to 50, R= H and/or C₁₈ to C₃₃;

b) from 5 to 90% of a lipid phase with dropping point higher than 60°C;

c) from 1 to 80% of a water phase;

d) from 1 to 80% of a powder phase.

2. Solid cosmetic product according to claim 1, in which the lipid phase comprises components selected among liquid and waxy esters, natural and/ or synthetic, liquid and waxy alcohols, silicone oils and waxes, polyalphaolefines with variable molecular weight, polyethylene waxes, microcrystalline waxes.
3. Solid cosmetic product according to claim 1, in which the water phase comprises wetting agents and electrolytes.
4. Solid cosmetic product according to claim 3, in which the wetting agents are selected among glycerine, butylenic glycol, hexylene glycol, from PEG 4 to PEG 100, sorbitol, manitol, saccharose, fructose.
5. Solid cosmetic product according to claim 3, in which the electrolytes are selected among NaCl, MgSO₄, Na-lactate, KCl.
6. Solid cosmetic product according to claim 1, in which the powder phase comprises excipient and pigment powder.
7. Solid cosmetic product according to claim 6, in which the excipient powders are selected among talc, kaolin, mica, rice starch, modified starches, reticulated polymethylmetacrylate, polyamides, tricalcic phosphate, silica, lauroyl lysine, barium sulphate, boron nitride.
8. Solid cosmetic product according to claim 6, in which the pigment are selected among titanium dioxide, iron oxides, ultramarine blue, zinc oxide, D&C red 30, D&C red 7 AI Lake, D&C yellow 5 AI Lake.



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EUROPEAN SEARCH REPORT

Application Number
EP 00 20 1176

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The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 2 October 2000	Examiner Pelli Wablat, B
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 2 October 2000	Examiner Pelli Wablat, B
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